

should add, has been compared by my friend Dr. Schaum with examples of that species in the Museum at Berlin), were captured by Senhôr Moniz, in the houses and shops of Funchal, during the summer of 1858; and I may state that I have myself taken it in similar positions in the Canary Islands.

[To be continued.]

XXX.—On the Tribe Colletieæ, with some Observations on the Structure of the Seed in the Family of the Rhamnaceæ. By JOHN MIERS, F.R.S., F.L.S. &c.

[Continued from p. 216.]

2. NOTOPHÆNA.

I propose this genus for a separate group, with flowers distinguished by the same peculiarity as those of *Colletia*—the total absence of petals,—but differing from the latter genus in its habit, its copious foliage, and in the form of its disk, which resembles that of *Discaria*. It is also characterized by the peculiar feature before alluded to—the union of the base of the opposite stipules, which gives an appearance of an articulation at every node,—a peculiarity often seen also in the middle of the spines when they are foliiferous. The type of the genus is the *Colletia serratifolia* of Ventenat, from Chile; the other species are mostly from the southern parts of the same country, and one is from New Zealand: hence the generic name, from *νότος*, *auster*; *φαίνομαι*, *appareo*. They sometimes form very leafy shrubs, at other times low decumbent bushes, bare of spines. Here we generally see a spineless branchlet issuing from below each spine, and bearing both leaves and flowers, which quite confirms the supposition that the scaly tubercle seen in *Colletia* and other genera is only a very abbreviated or suppressed branchlet.

NOTOPHÆNA, gen. nov.;—*Calyx* urceolato-campanulatus, usque ad medium 4–5-fidus, laciniis reflexis, intus carina prominula calloque apicali notatis, æstivatione valvatis, imo demum circumscissus. *Petala* nulla. *Stamina* 4–5, tubo calycino inter lacinias inserta; *filamenta* filiformia, laciniis breviora, erecta; *antheræ* ovatæ, 2-lobæ, 2-loculares, loculis rima longitudinali antice hiantibus. *Discus* pateriformis, hypogynus, imo tubi adnatus, margine brevi, libero, crenato. *Ovarium* superum, globosum, sæpe pilosum, 3-sulcatum, 3-loculare; *ovula* in loculis solitaria, erecta. *Stylus* brevis, calycis tubum æquans. *Stigma* obtusum, breviter 3-lobum. *Fructus* siccus, subglobosus, cupula calycina discoque suffultus et adnatus, in coccos 3 resiliens; istis seminibusque ut in *Colletia*.

Suffrutices (vel arbusculæ) *Chilenses, Magellanici et Novæ Zelandici*, ramulis *decussatis, elongatis, spinosis vel sæpius inermibus*; foliis *oppositis, ellipticis, crenulato-dentatis, discoloribus*; floribus *parvis, infra spinas, axillaribus, pedunculatis, solitariis, vel fasciculatis*.

1. *Notophaena serratifolia*, nob. *Colletia serratifolia*, Vent. (non Hook.) *Hort. Cels.* 92. tab. 15; *DC. Prodr.* ii. 28; *Brongn. Ann. Sc. Nat.* x. 366; *Lam. Dict. Suppl.* ii. 312; *id. Illustr.* pl. 930. *Rhamnus Spartium, Dombey*;—ramosa, ramis ramulisque patentissimis, virgatis, sub-4-gonis, sublævibus, glaberrimis, parce foliosis, subspinosis, spinis longiusculis, foliosis, apice calloso-pungentibus, patentibus; foliis internodiis æquilongis, sæpe 3, fasciculatis, oblongis, vel lineari-oblongis, apice bisinuatis et mucronatis, imo in petiolum brevem attenuatis, breviter serrato-denticulatis, dentibus glanduliferis, crassiusculis, enerviis, utrinque glaberrimis, subtus pallide flavis, stipulis navicularibus, linea transversali prominente inter se nexis, nodis hinc quasi articulatis; floribus axillaribus, subsolitariis, pedunculo calyce longiore, filiformi; calycis tubo brevi, imo inflato, limbi laciniis 5, brevibus, reflexis, staminibus ori insitis, stylo exserto.—Chile.—*v. s. in herb. Mus. Paris*, “Pérou” (sine dubio erroneo), Dombey.

This species differs from the following, with which it has been generally confounded, in its green, slender, almost herbaceous stems and branchlets, which are somewhat angular, spreading nearly at a right angle, quite glabrous, furnished with spines, and sometimes bare of leaves, in its fewer or more deciduous, smaller, and nerveless leaves, in its fewer and larger flowers, and its larger fruit. The internodes are from $\frac{1}{2}$ inch to 1 inch apart, and are almost articulated at each axil by the stipular extension before described; the divaricated spines, decussating at each axil, are about the length of the internodes, and are foliiferous in their middle: in the younger floriferous branchlets, the spines are wanting at the nodes, from which one to three leaves spring on each side; the leaves are 4 to 7 lines long, $1\frac{1}{2}$ to 2 lines broad, bearing small glandular teeth on the margin, of which three, more conspicuous than the others, terminate the apex.

The specimen from which this account is derived is the original type described by Ventenat: the flowers here have all fallen away, but the fruit remains, generally solitary in the axils; the peduncle is 5 or 6 lines long, and the 3-lobed capsule is about 3 lines in diameter*.

* A drawing of this species will be shown in the ‘Contributions,’ Plate 37 A.

2. *Notophana foliosa*, nob. *Colletia serratifolia*, Hook. (non Vent.) var. β , *foliosa*, Bot. Misc. iii. 173. *C. crenata*, Clos, loc. cit. 35. *Rhamnus diffusus*, Clos, in Gay, Chile, ii. 20;—arbuscula frondosa, ramis ramulisque haud patentibus, nonnullis spinescentibus, spinisque erectioribus, virgatis, teretibus, striatis, pallidis, aut sæpius fusco-rubris; ramulis novellis inermibus, erectiusculis, elongatis vel abbreviatis, foliiferis et floriferis, et infra spinas (ubi adsunt) nascentibus; stipulis oppositis, rubellis, latiusculis, breviter trigonis, concavis, apice 2-dentatis, imo linea transversali circa caulem connexis; foliis oppositis, ellipticis, vel oblongis, apice obtusis et mucronulatis, imo acutioribus, crenulato-dentatis, dentibus sæpius fere obsoletis, supra læte viridibus, subtus pallide glaucis, penninerviis, nervis fuscis anastomosantibus, glabris, vel sub lente parce puberulis, petiolo canaliculato, tenui; floribus 3, fasciculatis ex quaque axilla; pedunculo erecto, demum incurvo; calyceque glabro, urceolato, 5-fido; staminibus erectis, laciniis reflexis, æquilongis; ovario piloso, stylo glabro, longe exserto; fructu minore.—Chile.—v. s. in variis herbariis; Valparaiso (Cuming, 427-637); Valdivia (Bridges, 594); Concepcion (Germain, sub nom. *Trevoa 3-nervis*); in herb. Mus. Paris (Gay); Dombey, sub nom. *Rhamnus Chacay*.

This is a small tree, with rather virgate branches and an abundant foliage of small leaves, with long spines, or rather branchlets having an apiculate termination; the branches are quite glabrous; the spines, $\frac{3}{4}$ to $1\frac{1}{4}$ inch long, are always articulated in the middle, and there floriferous; the fertile branchlets that spring from below them bear an abundance of flowers and leaves, with the axils approximated, so that the inflorescence appears somewhat spicated; these branchlets, though sometimes much longer, seldom exceed half an inch in length, bearing in each node two opposite sets of three fasciculated flowers and two opposite leaves; the leaves are from 6 to 9 lines long, 3 lines broad, on a petiole 1 line in length; those of the main branches are 1 inch long, and half an inch broad, the margins generally revolute, with crenated, almost obsolete teeth, and yellowish. The peduncles are nearly 2 lines long; the broad and urceolate tube of the calyx is 1 line long, its segments and erect stamens $\frac{3}{4}$ line in length; the small hypogynous disk, adnate to it, is slightly concave, green, smooth, fleshy, with a raised undulating margin, and is half as broad again as the very pilose ovary which it supports. The 3-coccous fruit is about 2 lines in diameter, and pilose: when the cocci spring out of their bed, which they do with a noise and much elastic force, their persistent cup is seen to be formed of three distinct and

stout membranes,—the base of the calyx, the disk, and the adhering portion of the epicarp. The seeds are oval, dark brown, hard and polished, like those of *Colletia*. The stipules are very conspicuous, especially in the young floriferous branchlets; here they form in each axil a minute hollow navicular cup, with two erect, obtuse, ciliated, red, membranaceous lobes, connected with those of the opposite stipule by a short membranaceous vaginant sheath; the petiole springs out of the sinus between the lobes, and the three peduncles grow out of the hollow of the cup*.

Dombey's plant, labelled as from Peru, is beyond doubt from Chile. Germain's specimens were distributed under the name of *Trevoa 3-nervis*.

3. *Notophæna cognata*, n. sp.;—ramis elongatis, virgatis, angulato-striatis, glaberrimis, spinosis, spinis longiusculis, pungentibus, medio foliiferis; ramulis junioribus floriferis, sub spinis ortis eisque multo longioribus; foliis oppositis, elliptico-oblongis, crenato-serratis, basi latioribus vix acutis, e medio summum versus gradatim angustioribus, ibi obtusis et emarginatis, sub lente utrinque sparsim pilosulis, supra viridibus, subtus pallide glaucis, petiolo canaliculato, puberulo; stipulis vaginaque transversa conspicuis; floribus 2-4, fasciculatis, pedunculis elongatis, petiolo calyceque 2-4-plo longioribus, glabris; calyce glabro, tubo urceolato 4-fido, staminibus 4, laciniis paulo brevioribus, erectis; ovario piloso, stylo elongato, tubo longiore, glabro.—Insula Chiloë.—v. s. in herb. meo (Capt. King).

This species is intermediate between the foregoing and the following one, and is distinguished by its more slender branches, larger emarginated leaves, the greater length of its peduncles, and its tetramerous flowers. Its floriferous branchlets measure 3 or 4 inches, its spines about $1\frac{1}{2}$ inch; its leaves are 1 inch long, $\frac{1}{2}$ inch broad, on a petiole 2 lines in length; its peduncles are 3 lines long, the tube of the calyx 1 line long, the same in diameter, and the lobes of its border nearly of equal length †.

4. *Notophæna discolor*. *Colletia discolor*, *Hook. Icon.* 538; *Hook. fl. Flor. Ant.* ii. 255; *Rich. Voy. Astrol.* p. , pl. 14; —frondosa, glaberrima, ramulis teretibus, strictis, substriatis, fusco-rubris, spinosis, spinis patentibus, longiusculis, valde pungentibus, apicem versus foliiferis; ramulis junioribus floriferis sub spinis enatis, elongatis; foliis oppositis, oblongis obovatisve, obtusis, argute serrulatis, margine subrevoluto, in petiolum brevem attenuatis, supra viridibus, subtus pallide

* This species, with analytical details, will be seen in Plate 37 B of the 'Contributions.'

† A sketch of this plant will be shown in Plate 37 C of the same work.

glaucis, fere enerviis; stipulis transversim nexis, 2-dentatis, dentibus linearibus, acutissimis, ciliatis; floribus parvis, sub-solitariis, 4-meris; capsula 3-cocca pilosula. Patagonia.—*v. s. in herb. meo et Hook.*, Port Famine (Capt. King); *in herb. Mus. Paris*, Magellan (Voy. Astrolabe).

This is distinct from the two preceding species, in the smaller size of its obovate leaves, and its smaller flowers, as well as in the shape of its stipules. The discolorous feature of its leaves is common to every species of this genus. The spines are $\frac{1}{2}$ to 1 inch long; the leaves are 5 lines long, $2\frac{1}{2}$ lines broad, on a petiole barely 1 line in length; the peduncle is 2 lines long; the tube of the calyx is $\frac{3}{4}$ line long, the same in diameter, and its short revolute teeth are only $\frac{1}{4}$ line in length: the peduncle in fruit becomes thicker; it is then 3 lines long, and is deflected; the 3-coccous fruit is 2 lines in diameter; it is sometimes 4-coccous.

5. *Notophæna Magellanica*, n. sp.;—suffruticosa, inermis, sub lente pilosula, ramulis subangulatis, sub-4-gonis, axillis approximatis; foliis parvulis, ovato-oblongis, utrinque obtusis, vel imo subcuneatis, carnosulis, margine integerrimis, vel obsolete dentatis, supra nitidis, viridibus, subtus pallidis, nervis omnino immersis, petiolo brevissimo, stipulis præcedentis; floribus parvis, in axillis oppositis, utrinque 3, fasciculatis, 4-meris.—In Fretum Magellanicum.—*v. s. in herb. Mus. Paris*, Sandy Point (Lechler, 1029, sub nom. *Colletia discolor*); *in herb. Hook.*, Cordillera de Arauco (Lechler, 2994).

This is a well-marked species; its branchlets have a greyish bark; its axillary nodes are 4 or 5 lines apart, and in the young branchlets 2 lines apart; the leaves are simply opposite, $2\frac{1}{2}$ –3 lines long, $1\frac{1}{4}$ line broad, on a short petiole: the flowers are small, the peduncle being 1 line long; the calyx, including its segments, is of the same length, and $\frac{3}{4}$ line diameter*.

6. *Notophæna tomentosa*. *Colletia tomentosa*, *Philippi*, *Linnaea*, xxviii. 618;—ramis cinereo-tomentosis; foliis parvis, obovatis, læte viridibus, pubescentibus, adpresse serratis: stipulis minutis, ovato-lanceolatis, fuscis; floribus subfasciculatis; pedunculis 1-floris, glabris, calycem glabrum æquantibus, calycibus tubulosis, dentibus reflexis tubum dimidium æquantibus; petalis nullis, staminibus styloque calycem æquantibus.—Chile, prope San Antonio, Prov. Valparaiso.

This diagnosis is copied from Dr. Philippi's description in the

* This species will be represented in Plate 37 D of the 'Contributions.'

'*Linnaea*,' as above quoted. The absence of spines, the want of petals, and other characters show not only that it belongs to this genus, but also that it is very closely allied to the preceding and following species.

7. *Notophæna Andina*, n. sp.;—suffruticosa, humilis, inermis, procumbens; ramulis lignosis, subtortuosis, nodosis, foliosis; foliis oppositis, e gemmulis axillaribus elongatis squamosis productis, ovatis, utrinque obtusiusculis, aut basi acutioribus, integerrimis, crassiusculis, ubique parce pilosulis, supra viridibus, subtus pallide glaucis, penninerviis, petiolo brevi canaliculato pubere; stipulis imo latis, rubris, 2-fidis, ciliatis, inter se connexis; floribus paucis, subaggregatis; pedunculo 1-floro, petiolo longiore, piloso, erecto; calyce rigide puberulo, limbo 5-fido, staminibus 5 laciniis dimidio brevioribus; ovario glabro.—In Andibus Chilensibus excelsioribus.—*v. s. in herb. Hook.* (e declivitate orientali, Bridges, No. 1208).

This species is well distinguished by its procumbent spineless habit and copious aggregated foliage; its stunted proportions are consequent on its lofty Alpine growth. Its leaves grow out of elongated tubercles, or nascent branchlets, which probably in the following year become branches; these young shoots, owing to the near proximity of their axils, appear as if imbricated by the stipular appendages, and these axils bear flowers as well as leaves. The main stems also appear articulated at each node by their very conspicuous red stipules, which are similar to those of the other foregoing species. The leaves are 5 to 9 lines long, 4 to 5 lines broad, on a petiole 1 or $1\frac{1}{2}$ line long; they are discolorous, as in all the others, but with darker immersed nervures below. The peduncle is 2 lines long, the tube of the calyx $1\frac{1}{2}$ line, the segments in addition $\frac{1}{2}$ line long*.

8. *Notophæna Toumatou*. *Discaria Toumatou*, *Raoul, Ch. Pl. Nouv. Zélande*, p. 29. *Discaria Australis*, var. *apetala*, *Hook. fil. Flor. Nov. Zeal.* i. 47;—Frutex suborgyalis, glaberrimus, ramis tortuosis, subprocumbentibus, cortice membranaceo laxo, ramulis diffusis, horizontalibus, teretibus, striatis, spinescentibus, spinis elongatis, patentibus, calloso-pungentibus; foliis parvulis, fasciculatis, e tuberculo squamoso infra spinam prodeuntibus, lineari-oblongis, obtusis aut acutis, in petiolo brevi, spathulatis, integerrimis, glaberrimis, crassiusculis, supra viridibus, nitentibus, enerviis, subtus pallide glaucis, nervis violaceis immersis; stipulis minutis, petioliferis, 2-fidis, dentibus lanceolatis, erectis, oppositis, et transversim nexis;

* This plant is drawn in Plate 37 E of the 'Contributions.'

